



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,540	07/25/2003	Herve Baudry	0513-1073	1169
466	7590	09/23/2004		EXAMINER
YOUNG & THOMPSON				CHAPMAN JR, JOHN E
745 SOUTH 23RD STREET				
2ND FLOOR			ART UNIT	PAPER NUMBER
ARLINGTON, VA 22202				2856

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/626,540	BAUDRY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	John E Chapman	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) Claim(s) 5 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 7/25/03.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. The disclosure is objected to because of the following informalities:

Page 2, line 10, "manufacturing dispersion" is unclear.

Page 3, line 16, "manufacturing dispersion" is unclear.

Appropriate correction is required.

⋮

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foote in view of Norling et al.

Foote discloses an inertial sensor in Fig. 3 comprising at least one vibrating element 28, 30 having one end connected to a support element 42 and an opposite end connected to a test mass 54 which is hinged to the support element by at least two link elements 14, wherein the link elements 14 are housed in a cavity surrounding the support element 42. The vibrating elements 28, 30 span the cavity surrounding the support element 42. Hence, the only difference between the claimed invention and the prior art consists in providing a vibrating element in the cavity, rather than across the cavity. It is known in the art to provide a vibrating element in a cavity between a support element and a test mass, as taught by vibrating element 40 of Norling et al., in order to batch process for low cost and provide for high stability. Accordingly, it would have

been obvious to provide a vibrating element 14 of Foote in the cavity, rather than across it, for low cost and high stability.

Regarding claim 2, Norling et al. teaches providing a cavity in support element 30 in order to reduce nonlinearity in the vibrating element 40. Accordingly, it would have been obvious to provide a cavity in support element 42 in order to reduce nonlinearity in the vibrating element 28 or 30.

Regarding claim 3, the vibrating elements 28, 30 of Foote vibrate in the plane of the sensor, which is perpendicular to the sensing axis.

Regarding claim 4, the link elements 34 of Norling et al. extend along the hinge axis HA, which axis is substantially perpendicular to the vibrating element 40.

Regarding claim 7, Foote discloses a decoupling frame 16 in Fig. 2. It would have been obvious to provide a decoupling frame for the support element 42 in Fig. 3 in order to provide stress isolation for the sensor.

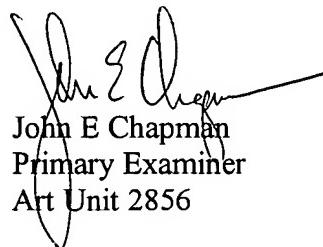
4. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Amand discloses an inertial sensor comprising at least one vibrating element 20a, 20b having one end connected to a support element 16 and an opposite end connected to a test mass 12 which is hinged to the support element by a link element 36. Blake et al. discloses an

inertial sensor in Fig. 7 comprising at least one vibrating element 120, 122 having one end connected to a support element 124 and an opposite end connected to a test mass 126 which is hinged to the support element by at least two link elements 128, 130 and which includes a cavity in which the vibrating elements are received.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John E Chapman  
Primary Examiner  
Art Unit 2856